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**United States Patent** [19]**Logan**[11] **Patent Number:** **5,231,380**[45] **Date of Patent:** **Jul. 27, 1993**[54] **INPUT KEYBOARD TOUCH-SENSITIVE  
ADJUNCT**[75] **Inventor:** **James D. Logan, Windham, N.H.**[73] **Assignee:** **MicroTouch Systems, Inc.,  
Wilmington, Mass.**[21] **Appl. No.:** **731,281**[22] **Filed:** **Jul. 16, 1991****Related U.S. Application Data**

[63] Continuation of Ser. No. 391,440, Aug. 9, 1989, abandoned.

[51] **Int. Cl.<sup>5</sup>** ..... **G09G 3/02**[52] **U.S. Cl.** ..... **340/706; 340/711;  
341/22**[58] **Field of Search** ..... **340/706, 709, 710, 711,  
340/712; 341/22, 23, 31-34; 364/708; 310/313;  
400/479; 248/917, 918, 920**[56] **References Cited****U.S. PATENT DOCUMENTS**

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A method and apparatus to augment keyboard input to a computer: the apparatus including a sensor mounted on the keyboard which is responsive to physical contact by the user's hand and which emits signals corresponding to changes in pressure and position on the sensor. The apparatus also includes a controller card including an analog to digital converter to convert the position and pressure information into digital form for input into the computer. The sensor is located so that the user's thumb has access to the surface of the sensor without the need to move his or her fingers from the keyboard. A method of entering data into a computer includes sensing the pressure applied by the user's hand on a sensor, converting the sensor signal into digital form, and entering the digital information as an input to the computer.

**21 Claims, 4 Drawing Sheets**